

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Cancel claims 1-16.

17. (Original) A turbine bucket including a bucket airfoil having an airfoil shape and a plurality of cooling holes extending between root and tip portions thereof, said airfoil having a nominal profile substantially in accordance with Cartesian coordinate values of X, Y and Z set forth in Table II wherein the Z values are non-dimensional values from 0.05 span to 0.95 span convertible to Z distances in inches by multiplying the Z values by a height of the airfoil in inches, and wherein X and Y are distances in inches which, when connected by smooth continuing arcs, define airfoil profile sections at each distance Z, the profile sections at the Z distances being joined smoothly with one another to form a complete airfoil shape, said holes including at least a first hole adjacent a leading edge, at least a second hole adjacent a trailing edge and a plurality of holes intermediate said leading and trailing edge holes, said plurality of intermediate holes including holes spaced from one another on opposite sides of a mean camber line between said leading and trailing edges wherein certain of said intermediate cooling holes form a generally airfoil-shaped envelope within and along the airfoil between said root and tip portions, said first, second and intermediate holes identified as holes numbered, H1, H16 and H2-H14, respectively, in Table I, holes being located in accordance with X and Y coordinate values set forth in Table I in a plane passing through the root of the airfoil section at 5% span .

18. (Currently Amended) A bucket according to Claim 17 wherein said holes H2-H14 and H16 are located in accordance with X and Y coordinate values set forth in Table I in a plane passing through the airfoil at 50% span.

19. (Currently Amended) A bucket according to Claim 17 wherein said holes H2-H14 and H16 are located in accordance with X and Y coordinate values set forth in Table I in a plane passing through the airfoil at 90% span.

20. (Currently Amended) A bucket according to Claim 17 wherein said holes H2-H14 and H16 are located in accordance with X and Y coordinate values set forth in Table I in planes passing through the airfoil at 50% and 90% span, respectively.

21. (Original) A bucket according to Claim 20 wherein said certain holes are defined in Table I as holes numbered H2-H11 at 5% span.

22. (Original) A bucket according to Claim 20 wherein said certain holes are defined in Table I as holes numbered H2-H11 at 90% span.

23. (Currently Amended) A bucket according to claim 20 wherein said holes numbered ~~H1-H16~~ H1-H14 and H16 in Table I have respective hole diameters as indicated in Table I.

24. (New) A turbine bucket including a bucket airfoil having an airfoil shape and a plurality of cooling holes extending between root and tip portions thereof, said airfoil having a nominal profile substantially in accordance with Cartesian coordinate values of X, Y and Z set forth in Table II wherein the Z values are non-dimensional values from 0.05 span to 0.95 span convertible to Z distances in inches by multiplying the Z values by a height of the airfoil in inches, and wherein X and Y are distances in inches which, when connected by smooth continuing arcs, define airfoil profile sections at each distance Z, the profile sections at the Z

distances being joined smoothly with one another to form a complete airfoil shape, one of said holes extending adjacent a leading edge, at least a pair of holes extending adjacent a trailing edge and a plurality of holes extending intermediate said leading and trailing edge holes, said plurality of intermediate holes including holes spaced from one another on opposite sides of a mean camber line between said leading and trailing edges wherein certain of said intermediate cooling holes form a generally airfoil shaped envelope within and along the airfoil between said root and tip portions, said first hole, said pair of holes and said intermediate holes identified as holes numbered H1, H15 and H16, and H2-H14, respectively in Table I being located in accordance with X and Y coordinate values set forth in Table I in a plane passing through the root of the airfoil section at 5% span.

25. (New) A bucket according to claim 24 wherein said holes H1-H16 are located in accordance with X and Y coordinate values set forth in Table I in a plane passing through the airfoil at 50% span.

26. (New) A bucket according to claim 24 wherein said holes H1-H16 are located in accordance with X and Y coordinate values set forth in Table I in a plane passing through the airfoil at 90% span.

27. (New) A bucket according to claim 24 wherein said holes H1-H16 are located in accordance with X and Y coordinate values set forth in Table I in a planes passing through the airfoil at 50% and 90% span, respectively.

28. (New) A bucket according to claim 27 wherein said certain holes are defined in Table I as holes numbered H2-H11 at 5% span.

29. (New) A bucket according to claim 27 wherein said certain holes are defined in Table I as holes numbered H1-H11 at 90% span.

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30. (New) A bucket according to claim 27 wherein said certain holes numbered H1-H16

In Table I have respective hole diameters as indicated in Table I.